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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/605,508

10/03/2003

Sherman Chih-Yee Jen

GEMS 0206 PA

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7590

03/11/2005

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EXAMINER

CHURCH, CRAIG E

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/605,508		JEN ET AL.	
	Examiner		Art Unit	
	Craig E. Church		2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6, 15-18, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan (6125167). Morgan teaches a CT x-ray source comprising heat-conducting oil filled outer housing 14, collimator C, vacuum envelope 16, rotary anodes 62 with x-ray emitting targets on opposing surfaces a and b (figure 5), cathodes 64 and control circuitry (figure 6) for applying high voltage and for activating the cathodes simultaneously or individually in different profiles. Morgan fails to teach that anode surfaces facing other anode surfaces lack x-ray targets, but it would have been obvious to dispense with facing targets in Morgan's tube in order to eliminate zones of high heat concentration and to move the x-ray planes closer together for greater CT imaging resolution.

Claims 4, 5, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as above in view of Geus (6188747). Morgan does not mention the composition of anodes 62. Geus teaches an x-ray tube with a dual anode 4 made of copper which is known to be a good electrical conductor with high heat storage capacity, and it would have been obvious to make Morgan's anodes of copper for this reason.

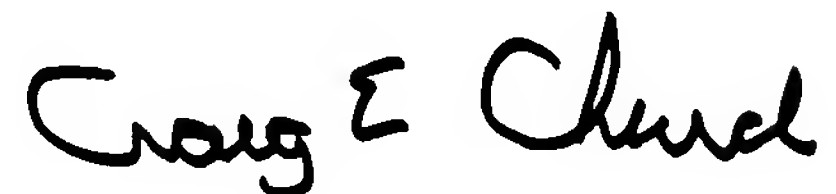
Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as above in view of Heuscher (4965726). Morgan reveals that his

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x-ray tube is to be combined with a CT scanner (columns 1 and 2), but does not detail such apparatus. Heuscher teaches a CT scanner including a rotating gantry 18 carrying an x-ray source 16 and a 2 dimensional detector 30, and it would have been obvious to employ Morgan's source in the Heuscher scanner as suggested by Morgan.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan in view of Heuscher as above in view of Geus. Morgan does not mention the composition of anodes 62. Geus teaches an x-ray tube with a dual anode 4 made of copper which is known to be a good electrical conductor with high heat storage capacity, and it would have been obvious to make Morgan's anodes of copper for this reason.

Any inquiry concerning this communication should be directed to Craig E. Church at telephone number (571)272-2488.



Craig E. Church
Senior Examiner
Art Unit 2882